

Appl. No. 09/997,084  
Amendment dated March 2, 2004  
Reply to Office Action of November 18, 2003

### **REMARKS/ARGUMENTS**

The above-identified patent application has been reviewed in light of the Examiner's Action mailed 18 November 2003 (Paper No. 6). Claims 1-19 and 22-30 were pending. Claims 1-19, 22-24 and 26-30 have been amended herein. Claims 20 and 21 have been cancelled without intending to abandon or to dedicate to the public any patentable subject matter. Accordingly, following entry of the foregoing amendments, Claims 1-19 and 22-30 will be pending. As set forth more fully below, reconsideration and withdrawal of the Examiner's rejections of the claims are respectfully requested.

#### **Objection to the Claims**

The Examiner has objected to Claim 4 as containing the typographical error of "lead" in place of "least." Applicants have corrected the error with this amendment.

#### **Claim Rejections Under 35 U.S.C. § 102**

The Examiner has rejected Claims 1-4 and 22 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,627,144 (hereinafter "Suda"). Applicants have amended Claims 1 and 4 and cancelled Claim 22 with this amendment. The amendment of Claim 1 is supported in the specification of the present application at page 34, lines 7 to 11.

Claim 1, as amended, requires reheating the carbon-based heating element in a vacuum to form a carbon-based heating element with a change rate of the electric specific resistance at a high temperature in the lit state with respect to the electric specific resistance at a normal temperature in the unlit state, set in the range between -20% and +20%. Suda does not teach or suggest this feature of the carbonaceous heating element nor this method of making heating elements. Applicants therefore respectfully request the Examiner's rejection under 35 U.S.C. § 102(b) be withdrawn.

#### **Claim Rejections Under 35 U.S.C. § 103**

The Examiner has rejected Claims 5-7, 9-14, 16-18, 20-21 and 23-30 under 35 U.S.C. § 103(a) as being obvious over Suda in view of U.S. Patent No. 6,515,264 (hereinafter "Toya").

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Applicants note that Claims 20 and 21 were restricted out of the present application in a restriction requirement imposed by the Examiner having a mailing date of 3 July 2003 (Paper No. 4) and Applicant's response thereto filed 31 July 2003. Therefore, Applicants have not considered the Examiner's rejections and arguments regarding the patentability of Claims 20 and 21 and make no assertions or concessions regarding the subject matter of these claims in this amendment and response.

As noted above with respect to the Examiner's rejection under 35 U.S.C. § 102(b), Claim 1, as amended, requires reheating the carbon-based heating element in a vacuum to form a carbon-based heating element with a change rate of the electric specific resistance at a high temperature in the lit state with respect to the electric specific resistance at a normal temperature in the unlit state, set in the range between -20% and +20%. Neither Suda nor Toya teach or suggest this feature of a carbon-based heating element. Therefore, Claim 1 and claims dependent therefrom are not obvious in view of the combination of Suda and Toya.

With respect to Claim 10, Applicants have amended Claim 10 to recite cylindrical connection terminals that radiate heat and are tightly fitted to the heating elements at a recess. Neither Suda nor Toya teach or suggest such connection terminals. Therefore, Applicants submit that Claim 10 and claims dependent therefrom are not obvious in view of the combination of Suda and Toya.

With respect to Claim 12, Applicants have amended Claim 12 to recite electrically-conductive, heat-radiating electrode terminals disposed at each end of the heating elements. Neither Suda nor Toya teach or suggest such electrode terminals. Therefore, Applicants submit that Claim 12 and claims dependent therefrom are not obvious in view of the combination of Suda and Toya.

With respect to Claim 23, neither Suda nor Toya teach or suggest a heating element having a plurality of terminals connected at both ends to electrode terminals which are, in turn, connected to internal lead wires through intermediate terminal plates. Therefore, Applicants submit that Claims 23 and 24 are not obvious in view of the combination of Suda and Toya.

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Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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